

KAAR, Elmar; ARAK, A., red.; LIIVAND, T., tekhn. red.

[Alvar soils and their utilization] Looalad ja nende kasutamine.
Tallinn, Eesti riiklik kirjastus, 1961. 40 p. (MIRA 15:5)
(Estonia--Soils)

KAAR, E. V.: Master Biol Sci (diss) -- "The forest qualities of 'al'vars' on the island of Saaremaa and possibilities for afforesting them". Tartu, 1958. 26 pp (Acad Sci Estonian SSR, Dept of Biol and Med Sci), 150 copies (KL, No 2, 1959, 119)

KAAR, Kh. [Kaar, H.]; KIRRET, O.; SHVINDLERMAN, G.

Studying the activity of catalysts on the basis of bis-cyclopentadiene compounds of titanium in the polymerization of ethylene. Izv. AN Est. SSR. Ser. fiz.-mat. i tekhn. nauk 12 no. 3:295-300 1963. (MIRA 16:11)

1. Academy of Sciences of the Estonian S.S.R., Institute of Chemistry. 2. Corresponding member of the Academy of Sciences of the Estonian S.S. R. (for Kirret).

ACCESSION NR: AP4014226

S/0023/63/000/004/0414/0419

AUTHORS: Kaar, H. (Kaar, Kh.); Kirret, O. (Corresponding member); Schwindlerman, G. (Shvindlerman, G.)

TITLE: A study of the activity of catalytic systems based on bis-cyclopentadienyl titanium compound in the polymerization of ethylene. 2. A study of the activity of the catalytic complex $(C_5H_5)_2TiCl_2 - (iso-C_4H_9)_2AlCl$

SOURCE: AN EstSSR. Izv. Ser. Fiz.-matem. i tekhn. nauk, no. 4, 1963, 414-419

TOPIC TAGS: polymerization, ethylene polymerization, catalyst, alicyclic compounds, titanium-aluminum catalyst, bis-cyclopentadienyl titanium compound, di-iso-butyl aluminum chloride, hydrochloric acid, alkylaluminum dichloride, polar titanium-aluminum bond

ABSTRACT: The effect of HCl and alkylaluminum chlorides on the performance of the catalytic complex $(C_5H_5)_2TiCl_2 - (iso-C_4H_9)_2AlCl$ in the polymerization of ethylene was investigated. The activity of the catalytic system was plotted on graphs and recorded as the yield of the polymer per 1 Mol of bis-cyclopentadienyl (BCPD) within a time period of 1.5 hours. Preliminary experiments with the polymerization

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ACCESSION NR: AP4014226

of ethylene in toluene by the Ti-Al complex revealed a maximum activity within a 20-40C temperature range. It was found that when either HCl or RAlCl_2 were introduced into the reactor previous to the formation of the catalytic Ti-Al complex, the polymerization of ethylene did not take place at all, while the green inactive Ti-Al compound was still formed. Since HCl and RAlCl_2 were effective when time was allowed for the formation of an active Ti-Al complex, it is interpreted by the authors as an indication of a certain time element required for the formation of C-Ti bonds. It is assumed that the incorporation of 0.5-1.0 millimole of HCl per 1 millimole of R_2AlCl results primarily in the formation of RAlCl_2 . The obtained polymers were of linear structure and had a melting point of 133-137C. Infrared spectral analysis revealed that when the catalytic system was stimulated by the addition of $(\text{C}_6\text{H}_5)_3\text{CCl}$ the obtained polyethylene contained a large amount of side branches and of double bonds. Orig. art. has: 3 tables and 4 charts.

ASSOCIATION: Institut khimii Akademii nauk Estonskoy SSR (Institute of Chemistry, Academy of Sciences Estonian SSR)

SUBMITTED: 20Jun63

DATE ACQ: 07Feb64

ENCL: 00

SUB CODE: CH

NO REF SOV: 004

OTHER: 006

Card 2/2

ACCESSION NR: AP4043032

S/0023/64/000/002/0148/0153

AUTHORS: Kaar, Kh. (Kaar, H.); Shvindlerman, G. (Schwindlerman, G.)

TITLE: On the interaction of tri-isobutyl of aluminum with alkyl chlorides

SOURCE: AN EstSSR. Izv. Seriya fiziko-matematicheskikh i tekhnicheskikh nauk, no. 2, 1964, 148-153

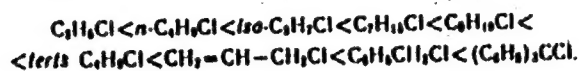
TOPIC TAGS: aluminum organic compound, alkylation, reaction rate, halide, aromatic hydrocarbon

ABSTRACT: As a sequel to the work of A. G. Pozamantir (Vy*sokomolekulyarny*ye soyedineniya, v. 2, 1026, 1960) and Pozamantir and M. P. Genusov (ZhOKh, No. 4, 32, 1175, 1962) on the sequence of the rate of interaction of alkyl halides in R_3Al , the authors show that the interaction between R_3Al , R_2AlCl or RA_1Cl_2 and alkyl halides,

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being by its nature a nucleophilic substitution at the aluminum atom, is accelerated, on the one hand, when the electrophility of the organoaluminum molecule increases, and on the other hand when the possibility of a C-Cl bond interruption in the RCl increases. The RCl reactivity order is



If the reaction mixture contains aromatic hydrocarbons or groups, the appearance of $RAlCl_2$ and $AlCl_3$ gives rise to Friedel-Crafts reactions followed by an evolution of free HCl. Such a reaction does not occur, however, with the tertiary alkyl halides of the R_3CCl type, probably because of steric hindrance. A reaction mechanism involving various alkyl halides reacting with aluminum tri-isobutyl is suggested. The experimental procedure and the reagents employed

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ACCESSION NR: AP4043032

are described, and the interaction with $(\text{iso-C}_4\text{H}_9)_3\text{Al}$ with the six compounds is described and the reaction products are tabulated. Orig. art. has: 3 formulas and 1 table.

ASSOCIATION: Institut Khimii Akademii nauk Estonskoy SSR (Institute of Chemistry, Academy of Sciences Estonian SSR)

SUBMITTED: 23Nov63

ENCL: 00

SUB CODE: OC

NR REF SOV: 002

OTHER: 002

Card 3/3

ACCESSION NR: AP4043033

S/0023/64/000/002/0154/0159

AUTHORS: Kaar, Kh. (Kaar, H.); Shvindlerman, G. (Schwindlerman, G.)

TITLE: Effect of addition of alcohols on the catalytic activity of the systems $(C_5H_5)_2TiCl_2 + R_3Al$ (or R_2AlCl) in polymerization of ethylene

SOURCE: AN EstSSR. Izv. Seriya fiziko-matematicheskikh i tekhnicheskikh nauk, no. 2, 1964, 154-159

TOPIC TAGS: alcohol radical, catalytic activity, ethylene, titanium compound, catalytic polymerization

ABSTRACT: This study was of interest because alcohols, on the one hand, are capable of dissociation with separation of a proton ($ROH \rightleftharpoons RO^- + H^+$), and on the other hand the anion OR^- is capable of replacing Cl in $(C_5H_5)_2TiCl_2$ with formation of a new titanium compound $(C_5H_5)_2Ti(OC_2H_5)Cl$, containing oxygen. It is shown that the activity

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of the bicomponent catalytic system $(C_5H_5)_2TiCl_2$ -- $(iso-C_4H_9)_2AlCl$ in the polymerization of ethylene increases if a third component selected from the group of alcohols is added to the system after the formation of the catalytic complex. Unlike in the previously observed action of small amounts of HCl or RCl , which interact with the anionic part of the catalytic complex, the influence of the alcohols is also connected with the direct addition of an OR group to titanium. This leads to an increase in the stability of the catalytic complex. The reagents $(Al(iso-C_4H_9)_3(iso-C_4H_9)_2AlCl$, and $(C_5H_5)_2TiCl_2$), and also the polymerization of the ethylene, were carried out in accordance with a procedure described previously by the authors (Izv. AN ESSR, Ser. fiz.-matem. i tekhn. nauk, no. 3, 295 and 414, 1963). The experimental procedure is briefly described. Orig. art. has: 1 figure and 4 tables.

Card 2/3

KAAR, Kh. [Kaar, H.]; SHVINDLERMAN, G. [Schwindlerman, G.]

Interaction of triisobutylaluminum with alkyl chlorides.
Izv. AN Est. SSR. Ser. fiz.-mat. i tekhn. nauk 13 no.2:
148-153 '64.

Effect of the addition of alcohols on the catalytic activity
of the systems $(C_5H_5)_2 TiCl_2 + R_3Al$ (or R_2AlCl) during
polymerization of ethylene. Ibid.:154-159 (MIRA 17:9)

1. Academy of Sciences of the Estonian S.S.R., Institute of
Chemistry.

KAAR, R.

New designs for building light-type hog houses. p. 82

SOTSILKTLIK POLLUMJANDUS. POLLUMJANDUS MINISTEERIUM.
Tallin, Hungary. No. 1, 1958.

Monthly List of East European Accessions (EEAI) LC, Vol. 8, no. 11
November 1959.

Uncl.

KAARAMAA, L.

AGRICULTURE

Periodical: SOTSIALSTLIK POLITIKAJANDUS Vol 14, no. 3, 1959 Feb.

KAARAMAA, L. The norm day or direct wages? p. 100

Monthly List of East European Accessions (LEAI) LC, Vol. 1, No. 5,
May 1959, Unclass.

KAARDE, I. A. Prof. and SIARE, R. K., Lecturer
Tartuski State University, Veterinary Faculty. (*Tartu State Univ, Estonian SSR*)
"Treatment of the obstruction of the alimentary tract with water pressure".
D: Veterinariia 27 (7), 1950, p. 52

KAARDE, I.A.

USSR

A special form of disease—bog disease, and its treatment with cobalt salts. I. A. Kaarde (State Univ., Tartu). *Mikroelementy i Zheni Rasteni i Zhivotnykh, Akad. Nauk S.S.S.R., Trudy Nauch. Mikroelement.* 1960, 403-46 (1962). The so-called bog sickness of fur animals which appears in areas of the Baltic States in late 1930's is caused by mineral deficiencies with especial emphasis on Co. Treatment with Co salts or admn. of Co to the feed stuffs (3 kg./hectare) was effective in controlling the disease. Symptoms of the disease are detailed; it occurs usually during the winter and leads to loss in wt., atrophy of muscles, and retarded shedding of body hair. G. M. Kasolov

KAARDE, I. A.

USSR/Medicine - Veterinary

FD-1290

Card 1/1 : Pub 137 10/20

Author : Kaarde, I. A. Professor

Title : Prevalance and etiology of toxic hepathodystrophy (TGD) in swine in the Esthonian SSR

Periodical : Veterinariya, 8, 42-43, Aug 1954

Abstract : Prevalance of TGD in swine has been discovered on those farms where im-proper sanitary-hygienic conditions are tolerated. Spoiled and decom-posed remnands of food particles are the principal causes for spread of TGD, because such food contains toxic substances causing inflammation of the intestinal tract. Incidence of this disease is greater among young swine, because their resistance to toxic condition is lower. Greater susceptibility to the disease has been discovered among swine that lack vitamin A₁, vitamin B complex, and vitamin C in their diet.

Institution : Esthonian Agricultural Academy

Submitted :

~~KHAARD, J.~~

USSR / Diseases of Farm Animals. Diseases Caused
by Helminths.

R-2

Abs Jour: Ref Zhur-Biol., No 2, 1958, 7354

Author : V. Ridala, ~~J. Kaard~~

Inst : Estonian Agricultural Academy

Title : Parasitic Diseases of the Intestinal Tract of
Hogs, their Distribution, Treatment and Prophylaxis.

Orig Pub: Sb. nauchn. tr. Est. s-kh. akad. 1956, 2, 175-181
(Est.; Rez. Russk.).

Abstract: Describes parasitological examinations of the
bodies of dead hogs and the organs of slaughtered
hogs, and those by means of coprological
analysis, made for the purpose of determining the
types of intestinal parasites of hogs, and the
frequency of the diseases caused by them, in

Card 1/2

42

KAARDE, I., prof., red.; PARRE, Yu. [Parre, J.], kand. vet. nauk, red.;
RIDALA, V., prof., doktor vet. nauk, red.; TILGA, V., doktor vet.
nauk, red.; LEEK, K., tekhn. red.

[Diseases of swine] Bolezni svinei. Tartu, Izd. Estonskoi sel'-
khoz. Akad. i Estonskogo nauchno-issl. in-ta zhivotnovodstva i
veterinarii, 1960. 349 p. (MIRA 15:1)

1. Tartu. Eesti põllumajanduse akadeemia. 2. Estonskiy nauchno-
issledovatel'skiy institut zhivotnovodstva i veterinarii (for
Tilga). 3. Estonskaya sel'skokhozyaystvennaya akademiya (for
Ridala).

(Swine—Diseases and pests)

KAARDE, I. A.

"The white muscle disease in lambs in the Estonian SSR and the prevention of same by means of sodium selenite."

report to be submitted at the 17th World Veterinary Congress,
Hanover, West Germany, 14-21 Aug 63.

KAARLE, I.A., prof.; KHERIVIMOV, V.P.; SEVRUK, O.; LUZYANIN, L.;
LEFNIK, E.; POTAPOV, V.M.; SIKORSKIY, A.N.

Brief news. Veterinariia 41 no.6:122-125 Je '64.

(MIRA 18:6)

KAARDE, J., prof.; REIDLA, K., kand. veter. nauk, zam.dots.;
SEPP, V., kand. veter. nauk, st. uchitel'; AVARSOO, H.,
red.; KOHU, H., tekhn. red.

[Veterinary physiotherapy] Veterinarfusioterapia. Tallinn,
Eesti Riiklik Kirjastus, 1963. 191 p. (MIRA 17:1)
(Veterinary medicine)

USSR / Plant Diseases. General.

O

Abs Jour: Ref Zhur-Biol., No 13, 1958, 58836.

Author : Kaarep, E.

Inst : Estonian Scientific Research Institute of Farming
and Agricultural Improvement.

Title : Recent Diseases of Plants in the Estonian SSR.

Orig Pub: Teaduslik-Tehn. inform büll. Eesti Maaviljeluse ja
Maaparanduse Teadusliku Uurimise Inst., Byul.
nauchno-tekh. inform. Est. n.-i. in-t zemled. i
melior., 1957, No 1, 19-24.

Abstract: The tomato root rot (*Vermicularia tramentaria*
Berk. et Br.) was detected in Tallinn in 1954.
From the tomato diseases, the cucumber mosaic
virus, besides the widely distributed tobacco
mosaic virus, became widespread as a disease

Card 1/3

1

KAAREP, E.

USSR/Plant Diseases. - Disease of Cultivated Plants.

0-3

Abs Jour : Ref Zhur - Biol., No 15, 1958, 63558

Author : Kaarep, E.

Inst : -

Title : Bitter Rot in the Plum (Caused by *Colletotrichum fructigenum* (Beck.) Vassil.) ... A New Disease in the Estonian SSR.

Orig Pub : Sots. poliumajandus, 1958, No 1, 32.

Abstract : No abstract.

Card 1/1

- 15 -

KAAREP, K.

Using movable glass-covered propped hothouses. p. 133.

SOTSIALISTLIK POLLUMAJANDUS. (Pollumajanduse Ministeerium) Tallinn,
Estonia. Vol. 13, no. 3, March 1958.

Monthly List of East European Accessions (EEAI) LC, Vol. 8, no. 11,
November 1959.

Uncl.

KERES, Leida; KAARI, Haldja; PARN, A., red.; KASEMETS, O., tekhn. red.
[Manual for pediatricians] Juhendeid lastearstide. Tallinn,
Eesti riiklik kirjastus, 1962. 331 p. (MIRA 15:5)
(PEDIATRICS)

KAARLI, K.

Chemical elements for ensiling should be used efficiently. p.448

SOTSIALISTIK PÕLLUMAJANDUS. Tallinn, Estonia. Vol. 14, no. 10, May 1959

Monthly List of East European Accessions (EEAI) LC. Vol. 8, No. 9, September 1959
Uncl.

AAMISEPP, I.; EICHENBAUM, E.; HALLER, E.; KAARLI, K.; KIIK, H.;
KIVI, V.; KOTKAS, H.; KORJUS, H.; LEIVATEGIJA, L.; LIIV, J.;
LÄNTS, L.; MÄLKSCO, A.; PEDAJA, V.; POLNA, H.; RANDALU, I.;
RUUGE, J.; SEKSEL, H.; TOOMRE, R.; TUPITS, H.; TUUL, S.;
TÖNISSON, H.; TÄÄGER, A.; VIIRAND, M.; VAHENÕMM, K.; ARAK, A.,
red.

[Plant breeding] Taimekasvatus. Tallinn, Eesti Raamat, 1964.
813 p. [In Estonian] (MIRA 18:1)

KAARMA, Iokhannes Yanovich; OSIN, Nikolay Petrovich; LAANMYAR,
Vambola Eduardovich [Laanmäe, V.]; MAGON, E.E., red.;
BARANOVA, L.G., tekhn. red.

[Estonian meat-type swine] Estonskaia bekonnaia poroda svi-
nei. Leningrad, Sel'khozizdat, 1962. 109 p. (MIRA 16:4)
(Estonia—Swine breeding)

JANES, Hans; KAASIK, Paul; PUUSEPP, Eugen; VOLDEK, Aleksander; VORK, H.,
prof., retsenzent; OORN, F., inzh., retsenzent; AHO, L., red.;
VAHTRE, I., tekhn. red.

[Electric machinery] Elektrimasinad [By] H. Janes ja teised.
Tallinn, Eesti riiklik kirjastus, 1961. 647 p. (MIRA 15:5)
(Electric generators) (Electric transformers)

NESGOVOROVA, Ye.D., kand.tekhn.nauk; KAASIK, P.Yu., kand.tekhn.nauk;
PARTS, R.R., inzh.; BORISOV, A.P., inzh.

Basic principles for designing regulated asynchronous motors.
Vest. elektroprom. 32 no.4:68-71 Ap '61. (MIRA 15:5)
(Electric motors, Induction)

KAASIK, Paul' Yuliusovich; NESGOVOROVA, Yelena Dmitriyevna;
USSER, A.S., kand. tekhn. nauk, red.

[Regulated squirrel-cage induction motors in automatic
control systems] Upravliaemye asinkhronnye dvigateli s
belich'ei kletkoi na rotore v sistemakh avtomatiki.
Moskva, Energiia, 1965. 198 p. (MIRA 18:6)

Kazak P.A.

KAAZIK, P.A. [Kasik, P.A.], inzh. BUTKEVICH, Yu.M., inzh. (Tallinn)

Stamp for inclined washers. Stroi.pred.neft.prom. 2 no.8:25-26
Ag '57. (MIRA 11:1)
(Tallinn--Washers (Mechanics))

KAASIK P. Yu.
KAASIK, P. Yu.

Kaasik, P. Yu.

"Investigation of Supplemental Dispersion and Supplemental Losses in the Loading of Asynchronous Machinery." Min Higher Education USSR. Leningrad Polytechnic Institute imeni M. I. Kalinin. Leningrad, 1955. (Dissertation of the Degree of Candidate in Technical Sciences.)

SO: Knizhnaya Letopis', No. 27, 2 July 1955

SOV/144-59-7-4/17

AUTHORS: Nesgovorova, Ye.D., Cand. Tech. Sci., Docent; and
Kaasik, P.Yu., Cand. Tech. Sci., Aspirant

TITLE: Calculation of the Mechanical Characteristics of Miniature
Induction Motors

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Elektromekhanika
1959, Nr 7, pp 31-35 (USSR)

ABSTRACT: Induction-type miniature motors or fractional horsepower
(f.h.p.) induction motors are widely used in automatic
control systems and elsewhere. Such characteristics of
these motors as their inductance and resistance are
different from those of normal induction motors and so the
usual formulae may not always be suitable for calculating
their mechanical and other characteristics. This article
is concerned with the formulae for calculation of electro-
magnetic torque of f.h.p. motors. Most Soviet designers
use the L-network equivalent circuit for an induction
motor, proposed by Acad. M.P. Kostenko, which is shown in
Fig 1. Variants of this circuit used in particular cases
are briefly discussed. For f.h.p. induction motors of
100-500 W, or for an induction motor supplied through a
line of high resistance and inductance and in some other

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SOV/144-59-7-4/17

Calculation of the Mechanical Characteristics of Miniature Induction Motors

circumstances, it is advisable to use the accurate L-network equivalent circuit in calculating the torque, which gives an expression somewhat different from formula (1). It is pointed out that the use of a simple correction factor for Eq (1), as advanced by Stolov, is not acceptable. The use of quadripole theory as recommended by V.V. Meshcheryakov is also deprecated. An expression is then derived for the torque using the accurate L-network equivalent circuit, and various calculations of the mechanical characteristics of the motor are compared with experimental values. Expressions (7) and (8) are derived for the secondary current and torque respectively, but as the torque expression is cumbersome the more convenient expressions (9) and (10) are derived after some simplification. The maximum torque is determined by inserting the value of the critical slip from Eq (11) into Eq (10). Formulae (1) and (10) for the torque were compared by calculating the mechanical characteristics (torque as a function of slip) for a three-phase fractional horsepower induction motor. The main characteristics of the machine are given and it is

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Calculation of the Mechanical Characteristics of Miniature Induction Motors

the same as that described by Stolov. The results are plotted graphically in Fig 1, where curve 1 corresponds to Eq (1), and curve 2 to Eq (10) (which coincides with the curve calculated by Stolov). Curve 3 gives the experimental results and curve 4 corresponds to the usual formulae (1) but embodies the inaccurate correction factors of Stolov. It will be seen that formulae (1) and (10) and Stolov's method give sufficiently accurate results but that curve 4 is very inaccurate. There are 2 figures and 4 Soviet references.

ASSOCIATION: Kafedra elektricheskikh mashin, Leningradskiy
politekhnicheskii institut (Chair of Electrical
Machines, Leningrad Polytechnical Institute)
Card 3/3
SUBMITTED: May 30, 1959

S/196/61/000/009/045/052
E194/E155

AUTHOR: Kaazik, P.Yu.

TITLE: The influence of motor parameters on the linearity of control of controlled squirrel-cage induction motors


PERIODICAL: Referativnyy zhurnal, Elektrotehnika i energetika, no.9, 1961, 10, abstract 9K 83. (Nauchno-tekhn. inform. byul. Leningr. politekhn. in-ta, no.8, 1960, 15-24)

TEXT: The article considers the influence of the parameters of two-phase squirrel-cage motors on the linearity of control, i.e. on the proportionality between the speed and the coefficient of the signal applied to the control winding when the torque is constant. Theoretical analysis and practical tests on a motor with a rating of 1 W and speed $n_c = 8000$ r.p.m. showed that for motors of up to 5 W the linearity of control is mainly influenced by the ohmic resistance of rotor and stator and also by the inductive leakage reactance of the rotor, whilst the inductive leakage reactance of the stator has negligible effect.

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The influence of motor parameters ... S/196/61/000/009/045/052
E194/E155

It is recommended to reduce the rotor leakage reactance and to increase its ohmic resistance. If the relative ohmic resistance of the rotor is increased above 1.6 there is no appreciable improvement in the linearity of control.
1 literature reference.



[Abstractor's note: Complete translation.]

Card 2/2

KAAZIK, P.Yu.

Additional losses in loaded asynchronous machines. Trudy LPI no.209:
281-299 '60. (MIRA 14.2)
(Electric machinery, Synchronous)

MANZIN, P.Yu.

Magnetic field in the air gap of synchronous machines with
fractional windings. Trudy LPI no. 209:300-312 '60.

(Electric motors, Induction--Windings) (EIPA 14:2)

MAZIN, P.Yu.

Additional dissipation through the air gap of asynchronous machines
with fractional windings. Trudy LII no. 209:313-337 '70.

(Index 14:2)
(Electric motors, Induction--Windings)

KAAZIK, P.Yu. [Kaasik, P.]

Precise circular diagram of a low-powered asynchronous machine.
Izv. vys. ucheb. zav.; elektromekh. 4 no. 1:38-50 '61. (MIRA 14:4)
(Electric motors, Induction)

KAAZIK, Paul' Yul'usovich, kand. tekhn. nauk, dotsent

Semigraphical method for determining the characteristics of
an asynchronous machine with amplitude control. Izv. vys.
ucheb. zav.; elektromekh. 5 no.7:730-738 '62.
(MIRA 15:10)

1. Kafedra elektricheskikh mashin Leningradskogo politekhnicheskogo instituta.

(Electric motors, Induction)

KAAZIK, Paul' Yuliusovich, kand.tekhn.nauk, dotsent

Semigraphical method for determining the characteristics of an asynchronous machine with presence of phase control. Izv. vys. uch. zav.; elektromekh. 5 no.8:866-875 '62. (MIRA 15:8)

1. Kafedra elektricheskikh mashin Leningradskogo politekhnicheskogo instituta.

(Electric motors, Induction)

KAAZIK, Paul' Yuliusovich, kand.tekhn.nauk,dotsent

Relative parameters of regulated asynchronous motors with
squirrel-cage rotors. Izv.vys.ucheb.zav.; elektromekh. 7
no. 3:339-347 '64. (MIRA 17:5)

1. Kafedra elektricheskikh mashin Leningradskogo politekhnicheskogo
instituta.

KAAZIK, Paul' Yuliusovich, kand.tekhn.nauk, dotsent; NESGOVOROVA, Yelena
Dmitriyevna, kand.tekhn.nauk, dotsent

Analysis of the stability and linearity of the mechanical
characteristic of controlled asynchronous m tors. Izv.vys.ucheb.
zav.; elektromekh. 7 no.11:1350-1359 '64.

(MIRA 18:3)
1. Kafedra elektricheskikh mashin Leningradskogo politekhnicheskogo
instituta.

TOKOV, M.I.; KAAZIK, P.Yu.

Semigraphical method for calculating the statistical characteristics of an asynchronous motor with speed regulation using an asynchronous frequency converter. Trudy LPI no.241:41-52 '64. (MIRA 18:4)

ABSTRACT: Conventional T-type equivalent circuits of capacitor induction servomotors have been used in complicated analytical calculations of these motors. L-type equivalent circuits have been used in the Soviet Union in similar

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L 36494-65

ACCESSION NR: AT5004639

analysis of the unbalanced operation of a capacitor motor by the symmetrical-
component method suitable for graphic-analytical calculations is presented.

1. The method of symmetrical components is used to analyze the unbalanced operation of a capacitor motor. The method is suitable for graphic-analytical calculations. The method is presented in the form of a flowchart. The method is suitable for graphic-analytical calculations. The method is presented in the form of a flowchart. The method is suitable for graphic-analytical calculations. The method is presented in the form of a flowchart.

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CIA-RDP86-00513R000619720011-4

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APPROVED FOR RELEASE: 08/10/2001

CIA-RDP86-00513R000619720011-4"

SOURCE: Leningrad. Politeknicheskii institut. Trudy, no. 241, 1964.
Elektromashinstroyeniye (Electrical machinery manufacture), 86-89

TOPIC TAGS: drag-cup motor; controllable induction motor; capacitor induction motor; squirrel-cage motor

ABSTRACT: Heretofore, drag-cup servomotors have been used in automatic control systems. However, squirrel-cage induction motors, which are simpler and more reliable, have been believed to have had a shorter acceleration time than squirrel-cage motors. Soviet investigators, however, find

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CIA-RDP86-00513R000619720011-4

that the time constant of a square wave pulse is constant

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APPROVED FOR RELEASE: 08/10/2001

CIA-RDP86-00513R000619720011-4"

L 36495-65

ACCESSION NR: AT5004640

cup motor for a motor capacity of 5 w or more. Under 3 w, the relation is questionable. To clarify the matter, five smaller-than-3 w motors were calculated, both types of the same power and with the same heating of stator windings. Estimated data (table 2) shows that, under the above conditions, the size of the drag-cup motor considerably exceeds, and its moment of inertia and time constant are both lower than those of the other motor.

KAAZIK, Paul' Yuliusovich, kand. tekhn. nauk, dotsent

Effect of the nonlinearity of the mechanical characteristics of
regulated induction motors on their operating characteristics.
Izv. vys. ucheb. zav.; elektromekh. 8 no.4:412-420 '65.

(MIRA 18:5)

1. Kafedra elektrichestva mashin Leningradskogo politekhnicheskogo
instituta.

NESGOVOROVA, Yelena Dmitriyevna, kand.tekhn.nauk, dotsent; KAAZIK, Paul'
Yuliyevich, kand.tekhn.nauk, dotsent; SHARAKHIN, Vladimir Nikolayevich,
assistant; ZABOROVSKIY, Sergey Aleksandrovich, assistant; BORISOV,
Al'bert Petrovich, assistant; TOKOV, Mikhail Ivanovich, assistant

Frequency system for regulating the angular velocity of an asynchronous
motor with fan load and auxiliary power supply. Izv.vys.ucheb.zav.;
elektromekh. 8 no.9:966-975 '65. (MIRA 18:20)

1. Kafedra elektricheskikh mashin Leningradskogo politekhnicheskogo
instituta (for Nengovorova, Kaazik, Borisov, Tokov). 2. Kafedra
elektrooborudovaniya promyshlennykh predpriyatiy Leningradskogo
politekhnicheskogo instituta (for Sharakhin, Zaborovskiy).

KARLIK, Paul' I. Il'ichovich, kandi.tekhn.nauk, docent; FUKHOV, A.A., staryiy inzh.

Photographical method for determining the mechanical and regulatory characteristics of two-phase controlled induction motors. Izv.vys. ucheb.zav.; elektromekh. 8 no.9:985-993 '65.

(MIRA 18:10)

1. Kafedra elektricheskikh mashin Leningradskogo politehnicheskogo instituta.

KAASIK, U.; SALUM, H.; SINISOO, M.; SILLAMAA, H., kand. tehnm. nauk,
retsenzent; ABO, L., red.; LAUL, U., tehnm. red.

[Electronic calculating machines] Elektron-arvutusmasinad.
Tallinn, Eesti Riiklik Kirjastus, 1960. 194 p. (MIRA 15:2)
(Electronic calculating machines)

KAAZIK, Yu. Ya.

USSR/Mathematics - Functional equations

Card 1/1 Pub. 22 - 1/47

Authors : Kaazik, Yu. Ya. and Gamme, E. E.

Title : About a method of approximate solution of functional equations

Periodical : Dok. AN SSSR 101/6, 981 - 984, Apr. 21, 1955

Abstract : A method is presented for the solution of the so-called functional equations of the type: $P(X) = 0$, where the P is (in a certain vicinity of the exact solution of X) an analytical operator for transformation from the Banach space X into a linear normed space Y . Four references: 2 USA and 2 USSR (1870-1950). Tables.

Institution : The State University, Tartu, Estonia

Presented by: Academician A. N. Kolmogorov, December 14, 1954

Z

SUBJECT
AUTHOR
TITLE

USSR/MATHEMATICS/Functional analysis

CARD 1/2 PG - 755

KAASIK Ju.Ja.

On the approximative solution of non-linear operator equations with iteration methods.

PERIODICAL

Uspechi mat.Nauk. 12, 1, 195-199 (1957)
reviewed 5/1957

Let be given the non-linear operator equation

$$(1) \quad P(x) = 0,$$

where $y = P(x)$ is an analytic operator of the Banach space X into the normalized space Y . Let x_0 be the initial approximation of the rigorous solution x^* , the further approximations let be given by the process:

$$(2) \quad \Delta x_{n+1} = x_{n+1} - x_n = F_n \Gamma_n P(x_n) \quad (n=0,1,\dots).$$

Here $\Gamma_n = [P'(x_n)]^{-1}$; F_n is a certain linear operator which is formed by the operators $E, \Gamma_n P''(x_n), \dots, \Gamma_n P^{(k)}(x_n)$ and the operator $\Gamma_n P(x_n)$ (k is a fixed integer). For the proof of the rigorous convergence $x_n \rightarrow x^*$ and in order to obtain the estimation for $\|x^* - x_n\|$ the author uses an idea of Kantorovič (Uspechi mat.Nauk 3, 6, 89-185 (1948)). He states that if there

KAAZIK, Yu. Ya.

SUBJECT USSR/MATHEMATICS/Functional analysis CARD 1/3 PG - 852
 AUTHOR KAAZIK Ju. Ja.
 TITLE On a class of iteration processes for the approximative solution of operator equations.
 PERIODICAL Doklady Akad. Nauk 112, 579-582 (1957)
 reviewed 6/1957

Let P be a two times differentiable operator of the Banach space X into the normalized space X . For the approximative solution of the equation

$$(1) \quad P(x) = 0$$

there is used the iteration process

$$(2) \quad \Delta x_{n+1} = x_{n+1} - x_n = -(E + \alpha R_n)^{-1} [E + (\alpha + 1)R_n] \Gamma_n P(x_n).$$

Here E is the identical operator, $\Gamma_n = [P'(x_n)]^{-1}$ and $R_n = \frac{1}{2} \Gamma_n P''(x_n) \Gamma_n P(x_n)$.

For different α (real number) one obtains several well-known iteration processes.

Theorem: 1) let exist the inverse operator $\Gamma_0 = [P'(x_0)]^{-1}$, where

Doklady Akad. Nauk 112, 579-582 (1957)

CARD 2/3

PG - 852

"APPROVED FOR RELEASE: 08/10/2001" and "CIA-RDP86-00513R000619720011-4"

$$(3) \quad \|x - x_0\| \leq \frac{\delta_0 \eta_0}{1 - s_0^2 h_0^2 (1 - h_0)},$$

where

$$\left\| \frac{1}{j!} \Gamma_0 P^{(j)}(x_0) \right\| \leq \Delta_0 H_0^{j-1} \quad (j=2, 3, \dots),$$

3) The magnitudes η_0, Δ_0, H_0 satisfy the inequations

$$|\alpha| \Delta_0 H_0 \eta_0 < 1, \quad |\alpha + 1| \Delta_0 H_0 \eta_0 < 1, \quad h_0 = H_0 \delta_0 \eta_0 < 1,$$

where

$$\delta_0 = \frac{1 - (|\alpha| - 1) \Delta_0 H_0 \eta_0}{1 - |\alpha| \Delta_0 H_0 \eta_0}, \quad q_0 = 1 - \Delta_0 \frac{h_0 (2 - h_0)}{(1 - h_0)^2} > 0$$

$$p_0^2 = \frac{s_0^2 h_0^2}{q_0 (1 - h_0)^2} \leq 1,$$

INSTITUTION: University Tartu.

CARPINISAN, Olimpia, ing.; TAFLAN, Mircea, chim.; DAN, V., ing.;
BESLIU, L., ing.; KABA, E., ing.; VERTIEN, P., ing.; DAVID, V., ing.

Experiments for utilizing the hydrocyanic acid from the
coke gas. Metalurgia Rum 15 no.5:348-352 My '63.

KABA, Emeric, ing.; LIVEANU, Nicolaie, ing.; GRINDEANU, Alexandru, ing.
GHERGHEL, Cornel, ing.; MARINUT, Miron;

Improving the determination of coal mixture for coking.
Metalurgia Rum 15 no.5:345-347 My '63.

KABA, Iuliu, ing.

The stage of the introduction of new techniques
and mechanization of the underground production
process in Jiu Valley mining exploitation. Rev min
13 no.8:351-354 Ag '62.

37954

S/137/62/000/005/142/150
A052/A101

1.2310

AUTHORS: Pechaň, J., Kába, J.

TITLE: New Czechoslovakian automatic friction welding machine

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 5, 1962, 68, abstract 5E378
("Techn. zprávy. Výzkum. ústav. naft. motoru", 8, no. 1, 1960 (1961),
26 - 28, Czech; Russian and German summaries)

TEXT: The basic principles of friction welding are outlined. The hydraulic control system of ATS-20 friction welding machine and its operation is described. The machine is intended for welding rods 20 - 50 mm in diameter, 200 mm long from the spindle side and of any length from the loose head side. The compressive force is ≤ 30 tons. The rotating speed is $\leq 1,600$ rpm. The temperature on contact sections is 800 - 1,260°C. The welding cycle is automated.

M. Tapel'zon

[Abstracter's note: Complete translation]

Card 1/1

KABACHEK, I.

We observed "Builder's Day" in the proper manner. Sel'.stoi.
11 no.9:16 S '56. (MLRA 9:11)

1. Brigadir stroitel'noy birgady Ordzhonikidzevskoy Mashinno-
traktornoy stantsii Sunzhenskogo rayona Groznenskoy oblasti.
(Building)

S/056/63/044/001/008/067
B108/B180

AUTHORS: Korotkov, K. A., Kabachenko, A. P., Lysikov, Yu. A., Dobrow, Yu. V.

TITLE: Internal bremsstrahlung which accompanies the β -decay of Ca^{45}

PERIODICAL: Zhurnal eksperimental'noy i teoreticheskoy fiziki, v. 44, no. 1, 1963, 45 - 47

TEXT: The bremsstrahlung was measured at 40 - 215 kev on a single-channel scintillation spectrometer with an NaI(Tl) crystal in an aluminum container. The Ca^{45} beta sources were prepared from a solution of calcium chloride and powdered CaCO_3 applied to and covered by a methacrylate film of 0.1 mg/cm^2 . The sources were kept at a pressure of 1 mm Hg. The spectrum was compared with that calculated according to the theory of J. K. Knipp and G. E. Uhlenbeck (Physica, 3, 425, 1936) and P. Bloch (Phys. Rev., 50, 4272, 1936). At low energies (60 - 130 kev) both curves agree very well, but at higher energies the discrepancy is considerable (35% at 215 kev) and cannot be eliminated by taking the Coulomb effect into consideration. There is 1 figure.

Card 1/2

Internal bremsstrahlung which ...

S/056/63/044/001/008/067
B108/B180

ASSOCIATION: Voronezhskiy gosudarstvennyy universitet (Voronezh State
University)

SUBMITTED: July 1, 1962

Card 2/2

ACC NR: AT6036519

SOURCE CODE: UR/0000/66/000/000/0097/0028-2

AUTHOR: Vasil'yev, I. S.; Ryzhov, N. I.; Derbeneva, N. N.; Portman, A. I.;
Dorofeyeva, N. Zh.; Khlaponina, V. F.; Kabachenko, A. S.

ORG: none

TITLE: Effect of proton and gamma irradiation on the mitotic activity of transplanted human cell cultures [Paper presented at the Conference on Problems of Space Medicine held in Moscow from 24 to 27 May 1966.]

SOURCE: Konferentsiya po problemam kosmicheskoy meditsiny, 1966. Problemy kosmicheskoy meditsiny. (Problems of space medicine); materialy konferentsii, Moscow, 1966, 97-98

TOPIC TAGS: proton radiation biologic effect, ionizing radiation biologic effect, relative biologic efficiency, human cell culture, radiation tissue effect, mitosis

ABSTRACT: Transplanted cell cultures are a valuable object of radiobiological study because of their high radiosensitivity. They are sometimes the only biological objects available for study of low-energy radiation effects. This series of experiments was conducted to determine the comparative effect of proton and gamma irradiation on the mitotic activity of human amniotic cells. Two-day-old cultures of amniotic cells, in single layer or in suspension, were irradiated with 630-Mev protons from an OIYAI

Card 1/3

ACC NR: AT6036519

synchrocyclotron or with Co^{60} gamma rays. The dose power of protons was 35 rad/sec and of gamma rays, 3 rad/sec. The activation and luminescent methods of proton dosimetry were used. Ionization chambers were used to monitor the beam. Mitotic activity was determined immediately after gamma irradiation, and then at intervals of 12, 24, 36, and 48 hr. Similar determinations were made 10, 20, 40, and 60 hr after proton irradiation.

A definite change in mitotic activity due to gamma and proton irradiation was observed in these experiments. Immediately after gamma irradiation with all doses the mitotic index decreased, reaching 1.6-1.3 with a 1000-1500 rad dose, as compared with 5.5 in the control. With doses of gamma rays from 750 to 1500 rad the mitotic index fell to 0.5-0.6 within 12 hr. A different pattern was observed following proton irradiation: within 10 hr of irradiation with 40-450 rad the mitotic index increased approximately 50% as compared with the control. Only with large proton doses did mitotic activity decrease. Twenty hr after proton irradiation with 40-1000 rad, the mitotic index reached a low of 1.4-0.07 (1.0 in the control).

Intensive recovery of the mitotic index in the postradiation period was

Card 2/3

ACC NR: AT6036519

observed with both types of radiation: the index had reached initial levels within 36—40 hr for almost all doses. Two days after gamma irradiation the mitotic index was 2—3 times higher than the initial level, whereas after proton irradiation the mitotic index recovered in three days.

Comparison of changes in mitotic activity after both proton and gamma irradiation showed the clear dose dependence of depression of mitotic activity. The same pattern of changes was observed after both types of irradiation, and quantitative relationships in observed processes were identical in both cases. [W. A. No. 22; ATD Report 66-116]

SUB CODE: 06 / SUBM DATE: 00May66

Card 3/3

MESHALKIN, Ye.N.; SERGIYEVSKIY, V.S.; KABACHEVSKAYA, E.R.

Late results of aortopulmonary anastomosis in dextraposition of the bulbus cordis (tetralogy of Fallot). Eksp. khir. 4 no.6: 17-26 N-D '59. (MIRA 14:6)

1. Iz Instituta eksperimental'noy biologii i meditsiny (dir. - prof. Ye.N.Meshalkin) Sibirskogo otdeleniya Akademii nauk SSSR i khirurgicheskogo otdeleniya 52-y gorodskoy klinicheskoy bol'nitsy Moskvy (glavnyy vrach P.S.Petrushenko). (TETRALOGY OF FALLOT)

KABACHINSKIY, N. N.

"On the problem of determining the pressure of water on the surface of a moving ship by the method of the effect function," Trudy Gor'k. industr. in-ta im. Zhdanova, Vol. VII, Issue 2, 1948, p. 5-24 - Bibliog: 6 items

SO: U-3850, 16 June 53, (Letopis 'Zhurnal 'nykh Statey, No. 5, 1949).

[N.]
KABACHINSKIY, N., doktor tekhnicheskikh nauk, professor.

Increasing the pulling power of screw tugboats. Mor. i rech. flot 13 no. 5:22-24
S '53. (MLRA 6:10)

(Tugboats)

123-1-1182

Translation from: Referativnyy Zhurnal, Mashinostroyeniye, 1957,
Nr 1, p. 174 (USSR)

AUTHORS: Kabachinskiy, N. N., Solov'yev, S. S.

TITLE: Determination of Stresses in Propeller Shaft and in
Screw Propeller When Its Blades Strike a Hard Object
(K zadache opredeleniya napryazheniy v grebnom valu i v
grebnom vinte pri udare yego lopasti o tverdyy predmet)

PERIODICAL: Trudy Gor'kovsk. politekhn. in-ta, 1956, 11, Nr 4, pp.12-24

ABSTRACT: In discussing this problem the authors take certain design
of propeller shafting with a screw propeller protected
from dynamic overstress by the introduction of additional
yielding elements in the junction of detachable blades
with the nave, in the bearing bushing of the propeller
shaft, and in the junction of the latter with the idler
shaft. They analyze the motion of the given mechanical
system while in vibration after an impact. The Lagrange-
type equations of motion are formed and a method for
calculation of inertia coefficients are indicated.

Card 1/2

KABACHINSKIY, N.N., doktor tekhn.nauk

Calculating stresses in the shaft and in the propeller as a
result of the blade striking a hard object. Trudy NTO sud.
prom. 7 no.2:305-332 '57. (MIRA 12:1)
(Shafting) (Propellers)

KABACHINSKIY, N.N., doktor tekhnicheskikh nauk.

Improving the propulsion capacity of the unit vessel-pusher. Rech.
transp. 16 no.1:25-26 Ja '57. (MIRA 10:3)
(Towing) (Ship propulsion)

KABACHINSKIY, N.N., doktor tekhn.nauk

Approximate analytical determination of the interaction between
propellers and pusher-tug hulls. Trudy GPI 14 no.1:3-13 '58.
(Ship propulsion) (MIRA 13:2)

KABACHINSKIY, N.N., doktor tekhn.nauk

Determining stresses in propeller shafts under the effect of the
propeller impact against a hard body. Trudy GPI 14 no.1:14-16
'58. (MIRA 13:2)

(Shafting)

(Strains and stresses)

KABACHINSKIY, N.N., doktor tekhn.nauk, prof.

Calculating the transient process in the movement of a self-propelled model. Trudy GPI 15 no.1:8-11 '61 [i.e. '59].

(Transients (Dynamics)) (Ship models--Testing) (MIRA 15:11)

KABACHINSKIY, N.N., doktor tekhn.nauk, prof.

Form of equations for the dynamics of complex systems. Trudy
GPI 15 no.1:5-8 '61 [i.e. '59]. (MIRA 15:11)
(Thermodynamics)

LAVRENTOVICH, Ya.I.; LEVON, A.I.; KABACHKI, A.M.

Effect of radiation with various magnitude of linear energy transfer on polymeric films containing dyes. Ukr.khim.zhur. 31 no.5:440-444 '65. (MIRA 18:12)

1. Institut fizicheskoy khimii imeni Pisarzhevskogo AN UkrSSR. Submitted Jan. 16, 1964.

MITEV, D.; KABACHKIEV, G.

Foreign bodies in the lower respiratory tract. Khirurgia (Sofia)
16 no.11:1013-1022 '63.

1. Vissih meditsinski institut, katedra po ushni, nosni i gurleni
bolesti, Sofia. Rukovoditel na katedrata: prof. G.Iankov.

*

L 14780-55 EWT(m)/EWP(t)/EWP(b) ASD(m)-3 JD

S /02136/64/000/019/0025/0025

TOPIC TAGS: metal, nonferrous metal, metal - ferrous 6

... device for controlling

to the static member.

ASSOCIATION: Gosudarstvennyy nauchno-issledovatel'skiy institut tsvetnykh
metallov (State Scientific Research Institute of Nonferrous Metals)

Card 1/2

BRYUKVIN, W.A.; PETYGIN, V.I.; KABACHKOV, N.I.

Methods of studying the macrokinetics of oxidation of sulfide materials with a continuous recording of the chemical reaction rate. Elektrokimiia 1 no.7:806-811 J1 '65. (MIRA 18:10)

1. Gosudarstvennyy institut tsvetnykh metallov.

CA

10

Processes and Properties Index

Aminonabazine. M. M. Katzel'man and M. I. Kabachnik. Russ. 39,106, Oct. 31, 1934. Anabazine is heated with amides of alkali metals in the presence of org. solvents.

ASSOCIATED METALLURGICAL LITERATURE CLASSIFICATION

1900-1939

1940-1949

1950-1959

1960-1969

1970-1979

1980-1989

1990-1999

2000-2009

2010-2019

2020-2029

2030-2039

2040-2049

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Amination of alkaloids with sodium and potassium amides. I. α -Aminonabazine. M. M. Kutznelson and M. I. Kabachnik, *Compt. rend. acad. sci. (U. R. S. S. S. I.)* 1951, 1, 400 9 (in German 400 11) (1951). Amination of *Anabasis aphylla* L. with NaNH₂ was carried out in different solvents at different temps. The best yield was 30% of the theoretical. 10.6 g. of anabazine and 10.1 g. of NaNH₂ were suspended in 50 cc. of freshly distd. Ph-NH₂ and heated to 160°. The product was decompl. with ice water and extd. with ether and the rats. were evapd. and fractionated in vacuo. The fraction b.p. 171°/50 was twice recrystd. from heptane. The pure crystals, C₁₀H₁₀N₄, m. 105-6° and were easily sol. in water, alc., ether and benzene. The substance is undoubtedly one of the isomers of α -Aminonabazine. The chloroplatinate of the aminonabazine forms small orange crystals m. above 225°. The picrate, small yellow crystals, m. 233-5° (decomps.). and is difficultly sol. in water and org. solvents. HCl salt m. 251.5-2°. N. N. Minshin

ASH-51A METALLURGICAL LITERATURE CLASSIFICATION

Amidation of alkylids with sodium and potassium amides. II. α - and α' -aminoanabasines. M. I. Kabanichnik and M. M. Katsnel'son. *Comp. rend. Acad. sci. U. R. S. S.* 4, 44-77 (in German 47-80) (1957); cf. C. A. 28, 4689^a.—Amidation of anabasine with NaNH_2 gave a mixt. of α - and α' -aminoanabasines. Recrystn. from PhMe gave the α' -I, m. 109° . Diast. of the mother liquor gave a fraction which on recrystn. from C_6H_6 gave the α -II, m. $85.5-86^\circ$. II in HCl treated with HCl gas and dry NaNO_2 gave α -chloroanabasine (III), m. $90.5-90^\circ$. Similarly α' -chloroanabasine (IV), m. $90.5-100^\circ$, was prepd. III and IV, resp., oxidized with KMnO_4 gave the corresponding chromophoric acids, m. $193-3^\circ$ and $197-9^\circ$. These reactions establish the structures of the 2 isomers which are opposite to that suggested previously (C. A. 28, 2249^a).
Julius White

2- and 6-Chloromicrotomic acids. M. M. Katzel'son
and M. J. Kabachnik. Russ. 40,974, Jan. 31, 1945. 2- or
6-Aminomicrotomic is diazotized, converted to the chloro
deriv. and oxidized with $KMnO_4$ or other known oxidizing
agents to the chloromicrotomic acid.

CA

17

Salts of lupinus β -aminobenzoate. M. M. Katzan'zon and M. I. Kabachnik. Russ. 40,977, Jan. 31, 1938. Lupinus is heated with β -nitrobenzoyl chloride and the product is reduced by known methods.

ASB-51A METALLURGICAL LITERATURE CLASSIFICATION

CLASS	RELATIONS
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1ST AND 2ND ORDERS		PROCESSES AND PROPERTIES INDEX		1ST AND 2ND ORDERS	
CH		<p>The mechanism of the reaction of pyridine and its derivatives with the alkali metal amides. M. I. Kabachnik. <i>Dokl. Akad. sci. U. R. S. S., Chem. sci. ser. chem.</i> 1971 0 (in German) (in Russian 076 8). The formation of α-amino compds., the chief reaction of the simple pyridine bases, is best explained by the action of NaNH_2 to the $\text{N}=\text{C}$ link, as proposed by Zeigler and Zeiser (C. A. 25, 1820). The formation of bipyridyls, which occurs in all cases and predominates in the more complex compds. like 2,5-dimethylpyridine, is due to the replacement of the α-H by Na, with evolution of NH_3. The Na compd. reacts with a mol. of the original base to form the dihydron deriv. which is oxidized to the bipyridyl. H. M. Leicester</p>		10	
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Processes and Properties of
 Ester of *p*-aminobenzoic acid and lupinine. M. M.
 Katsnel'son and M. I. Kabanikh. *Compt. rend. acad.*
 U. R. S. S. R. 1957(18) English 127-9(1955).
p-Nitrobenzoyl-lupinine-HCl (I), m. 220-31°, darkening
 240°, was prepd. in 95% yield from equimol. amts. of
p-NO₂C₆H₄COCl and lupinine. The base of I, m. 95°
 is insol. in H₂O and readily sol. in alc. and H₂O. I
 (11.8 g.) is reduced with 6.26 g. Sn in 20 cc. HCl (d.
 1.19), the Sn removed with H₂O and the resulting *p*-
 aminobenzoyl-lupinine (II) recrystd. from 50% alc., m.

162-3°. Yield 5.6 g. II is insol. in petr. ether and H₂O
 and slightly soln. in Et₂O and more sol. in alc. R.5.

CA

Ammonium of alkalioids with sodium and potassium
amides. III. The structure of chloranabasins isomers.
M. I. Kabachnik and M. M. Katsnel'son. *Compt. rend.*
228. 22. U. R. S. S. R. 30-9 (in English 90-91) (1900);
cf. C. A. 29, 2171'.—K. and K. had prepd. 2 isomers
which they called α -chloranabasin (I), m. 58.5-59.5°, b.
136°, and α' -chloranabasin (II), m. 99.5-100°. They
deterd. the structure of each by oxidizing I to α -chloronico-
tinic acid, m. 193-3°, and II to α' -chloronicotinic acid, m.
197-8°. Then Menzies, Orlovich and Orlovich
(C. A. 29, 6719') described the prepa. of a chloranaba-
sin, m. 99-0°, by a different method and assigned to it
the structure of I. They also prepd. a liquid *N*-methyl-
chloranabasin (III), b. 123-5°, by still a different method
and assumed that it was a deriv. of I. K. and K. have
repeated their work and are certain, from the m. p. and the
fact that M., O. and O. were vague in their proof of struc-
ture, that the 1st product had the structure of II and not of
I. K. and K. had insufficient I to prep. the *N*-Me deriv.
but they made *N*-methyl- α' -chloranabasin (IV), m. 46-
7°, b. 100-2° from II. This leaves doubt as to the
structure of III, for it may have been impure IV or an
isomer.

John E. Milbery

ASB 51A METALLURGICAL LITERATURE CLASSIFICATION

BC

Amidation with sodium and potassium azides on α - and α' -aminosuccinates. IV. Nitration of α' -aminosuccinate. M. M. KATENELSON and M. L. KARATCHEVNIK (Compt. rend. Acad. Sci. U.R.S.S., 1958, 3, 165-172).—2-(2'-Amino-5'-pyridyl)piperidine (I), m.p. 109° (α' -aminosuccinate; A., 1635, 223), with HNO_3 (d 1.4)— H_2SO_4 at 0° affords the 2'-nitroamine isolated as its sulphate + H_2O and anhyd. (II), m.p. 223° (decomp.), converted by heating with conc. H_2SO_4 at 70–80° into 2-(3'-nitro-2'-amino-5'-pyridyl)piperidine, m.p. 178.5–179°, also obtained, together with a substance, $\text{C}_{10}\text{H}_{12}\text{O}_4\text{N}_2$, m.p. 70°, by nitration of (I) at 70–90°. Diazonitration of (I) affords the corresponding 2'-OH-derivative (Na salt) isolated only as its peroxide, m.p. 241° (decomp.), also obtained by heating (II) with Ac_2O and subsequent hydrolysis with boiling 5% aq. NaOH . [Note: the m.p. of the 2'- and 5'-pyridyl compounds (*loc. cit.*) should be interchanged; that of the former is 88.5–90°.]

J. W. B.

ABSTRACT DETAIL ORIGIN LITERATURE CLASSIFICATION

10

Ring cleavage in cyclic azomethines. Cleavage of 6,7-dimethoxyisoquinoline. M. I. Kabachnik and A. I. Zilber, *J. Gen. Chem. (U. S. S. R.)*, **7**, 103-8 (1937). Zincke (C. A. 7, 1711) showed that 2,4-dinitrophenylisoquinolinium chloride (I) reacts with PhNMNH_2 with a rupture of the pyridine ring and formation of a deriv. of the tautomeric homophthalic anhydride: $(\text{ON})_2\text{C}_6\text{H}_3\text{NHCH:CHC}_6\text{H}_4\text{CH:NNHPh}$. Attempts to effect a similar ring cleavage in 2,4-dinitrophenyl-6,7-dimethoxyisoquinolinium chloride (II) by the action of various org. bases failed to give a deriv. of the expected tautomeric dimethoxyhomophthalic aldehyde 4,6-(MeO) $_2$ -3-CH:CH(OH)C $_6$ H $_3$ Cl $_2$. Refluxing II with 2 mols. of PhNH_2 in alc. for 6 hrs. resulted in about 100% 2,4-

(IV), m. 131-4.5°. $p\text{-MeC}_6\text{H}_4\text{NH}_2$ with III gave 2,4-(ON) $_2$ C $_6$ H $_3$ NHCC $_6$ H $_4$ Me, m. 130.7°, and IV. Pipelines gave 2,4-dinitrophenylpiperidine (not isolated), (CH $_3$) $_2$ NHCl and IV. The interaction of III with II and $p\text{-ONC}_6\text{H}_4\text{NHNH}_2$ gave mixts. of compds. which were not identified. Papaverine (200 g.) in 70% AcOH was oxidized with 300 g. $\text{Na}_2\text{Cr}_2\text{O}_7$ in AcOH at the boiling temp. and the ppt. was exd. with CHCl_3 , giving nearly 100% papaveraldine, m. 200.7°. This decompd. with NaOH at 250-300° (Dobson and Perkin, C. A. 5, 2057) gave 37.5% IV, m. 91.2°. III, m. 154.5°, resulted in 80% yield from IV and 2,4-(ON) $_2$ C $_6$ H $_3$ Cl by the Zincke method for the prepn. of I (*loc. cit.*). III in H $_2$ O treated with dil NH_4OH pptd. the free base, which is immediately re-arranged into the pseudobase 1-hydroxy-2-(2,4-dinitrophenyl)-6,7-dimethoxy-1,2-dihydroisoquinoline, red crystals, m. 103-3° (Me $_2$ CO & H $_2$ O). The Me ester, m. 110-10°, and Et ester, m. 145-8°. About 10 references. Chas. Blanc

ASUSSEA METALLURGICAL LITERATURE CLASSIFICATION

The action of acid chlorides on α -pyridyltriminams. M. I. Kabachnik, *J. Gen. Chem.* (U. S. S. R.), 7, 1749-53 (1937). α -Pyridyltriminamide (I) reacts energetically with p -ClNC₆H₄COCl (II) in HOAc or Ac₂O to give N- and p -nitrobenzoyl- α -chloro- α -hydroxypyridine (III), m. 142-3°. The benzoylation probably occurs on the O, though it is possible that it takes place on the N of the ring. When III is hydrolyzed in 1:1 HCl, it yields p -nitrobenzoic acid and α -hydroxy- p -chloropyridine (IV), m. 103-4°. IV is identical with the product (prepd. by chlorination of α -aminopyridine and diazotization of the compd. thus obtained to replace the NH₂ by OH). When IV is treated with NaOH and II, it gives III. I and H₂Cl in a 1:3 mixt. of Ac₂O and AcOH also give off N₂ and form benzoyl- $(p$ -chloro- α -hydroxypyridine), m. 95.0-5.5°, which is also formed from H₂Cl, NaOH and IV. The corresponding reaction with AcCl is not as smooth as with the H₂ compounds. H. M. Leicester

H. M. Leicester